



POSITION
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BULK DEEP-SEA MINING

WWF calls for a moratorium on applications for bulk extraction of the seabed for minerals such as phosphate until sensitive offshore marine ecosystems along our coastline are adequately protected, more information is available, and a proactive and coordinated response between the Department of Mineral Resources (DMR), Department of Environmental Affairs (DEA) and the Department of Agricultural, Fisheries and Forestry (DAFF) is underway.

Context

For more Information

Dr Samantha Petersen
Senior Manager: Marine
WWF South Africa
spetersen@wwf.org.za
Tel. +27 73 237 8185

Bulk sediment mining of the deep sea floor is likely to have severe impacts on sensitive seabed habitats and the ecosystem services that they provide. The animals that depend on these habitats will suffer direct and knock-on effects, the extent, intensity and duration of which will depend on many factors related to the mining strategy and site-specific sediment, biogeochemical and ecosystem properties. The most likely impacts of foreseen mining methods in these deep ecosystems are discussed in the attached literature review. In-depth and site-specific studies with detailed input on the mining methods and tools, resource targets?, local geology, oceanography, biogeochemistry, ecosystems and life-cycles of fishery resources, will be required to estimate the ecological and economic impacts from specific mining projects. Certain of these impacts could be partly mitigated, although the destruction, and in many instances, permanent alteration of sea floor habitat seems inevitable with dredging of deep sea environments.

The implications of such mining activities for the health of the ecosystem, and hence its ability to provide sustainable renewable resources to society, will depend to a large degree on the nature and extent of the habitat type in question. Some habitats are very sensitive to habitat destruction, particularly harder ground habitats that may support complex, habitat forming species. Some unique habitats are extremely

restricted in their spatial extent and may already be threatened by other ocean uses. A bulk sediment mining operation in or near such a habitat could provide a real threat to its survival. Other benthic habitats may be more ubiquitous and wide-spread, and hence mining in such habitats might threaten only a small fraction of the total area covered by similar assemblages of species.

Bulk mining may also impact on key ecosystem services provided by the marine environment. These include the most obvious service of food provision through fisheries resources but also less obvious and well understood seabed regulating services such as concentration of organic material, carbon sequestration, storage of pollutants, sediment mixing and oxygenation and maintenance of structural complexity. Knowledge of ecological relationships in the ocean is more limited than for terrestrial biodiversity. However, there is potential for substantial progress in improving our bio-geographic classifications and mapping of patterns of historical human activities in marine and coastal areas through the Environmental Impact Assessment (EIA) and Strategic Environment Assessment (SEA) processes if undertaken adequately. This is supported by the recent decision taken by the CBD at COP11.

The mining of valuable minerals or other geological materials is generally not sustainable, as the formation rate of target minerals (and surrounding disturbed sediments) is far outpaced by the rate of resource extraction. South Africa is a signatory to the Reykjavik Declaration, prescribing an Ecosystem Approach to Fisheries management, which requires the holistic approach of maintaining a healthy ecosystem in support of managing fishery resources sustainably. The damage to benthic habitats and surrounding ecosystems has the potential to impact fishery resources, hence the location of proposed mining activity should be assessed with careful consideration of existing fishing grounds, as well as habitats or ecosystems that are critical to various life-stages of the fishery species. Key ecological support areas such as spawning areas, nursery areas and areas that provide for sustainable resource use are essential for the food security of South Africa. There are currently efforts to identify such ecological support areas and existing data reflects substantial overlap between new mining applications and such key ecological support areas.

WWF is not anti-mining per se, but pro the sustainable use of our ocean in a manner that integrates the various uses and users and does not limit the ability of future generations to benefit from the good and services these ecosystems provide to society. We believe that mining the seabed for minerals such as phosphate in an area that overlaps with important and valuable renewable resources, key ecological support areas and threatened ecosystems is not in line with these objectives and will undermine the sustainable use of these ecosystems. It is thus imperative to carefully consider the location of mining relative to ecosystem services, threatened ecosystems and other conservation priorities. It is also important to consider other industries utilising the marine ecosystems and the potential for cumulative impacts. As mining can result in permanently altered communities, conservation of key ecological support areas and sensitive and unique habitat types and their biodiversity is not compatible with bulk sediment mining of the same area. A notable concentration of vulnerable and critically endangered benthic ecosystems is clustered on the edge of the shelf, between the 200 and 500 m isobaths and overlaps

with the proposed mining areas. The priority focus areas for current prospecting applications coincide with much of these same threatened ecosystem areas.

Although the current applications on the table are for prospecting, the intention will be to ultimately mine the area if economically viable deposits of minerals are found. We believe that approving a prospecting right without a proactive and coordinated response creates the expectation that a mining right will be granted. The current approach of dealing case by case with each application is a particularly inefficient use of resources and requires a broader, more coordinated, response between the key government departments affected by this decision, namely DMR, DEA and DAFF, at a national level. It is also potentially wasteful use of the financial resources invested by the applicant should the required information (including social, economic and ecological data) not adequately be collected during prospecting as well as clearly articulating the risk that the detection of a viable deposit does not in any way determine whether mining will be considered.

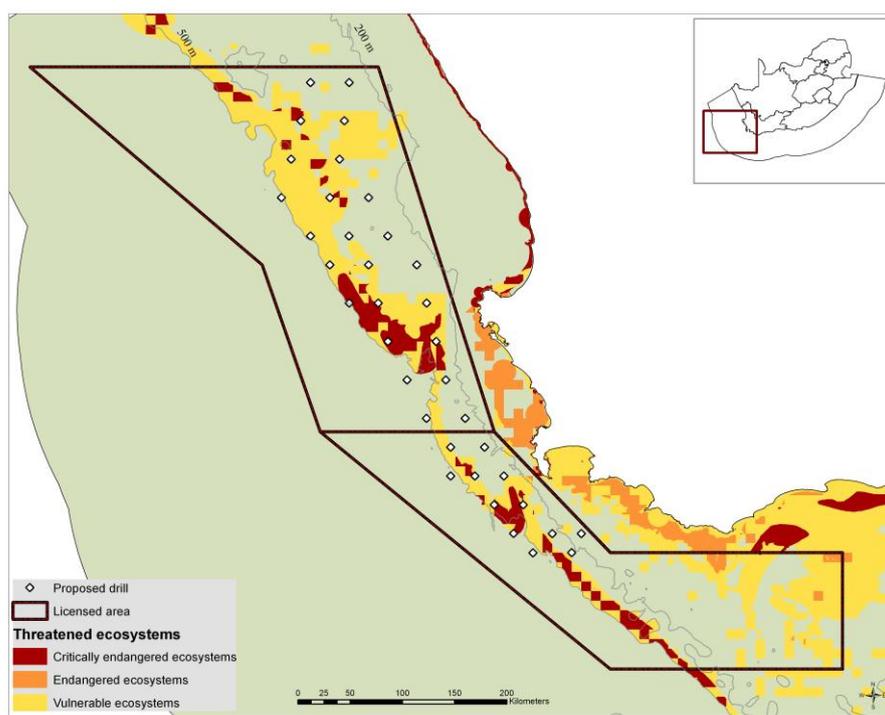


Figure 1: Most recent prospecting licence application areas overlaid with threatened ecosystems map.

Recommendations

WWF believes that deep-sea mining activities should not commence until measures are in place to protect deep-sea ecosystems from adverse impacts. WWF calls for a proactive and coordinated response between DMR, DEA and DAFF to address

applications for bulk extraction of the seabed for minerals such as phosphate, and calls for a moratorium until more information is available and sensitive offshore marine ecosystems are adequately protected. WWF strongly encourages the Department of Mineral Resources to take the approach the Northern Territory of the Australian Government has taken (see attached) where they have placed a moratorium on mining and prospecting of the seabed until more information has been obtained on its potential impacts.

Deep-sea mineral mining should not be permitted in South African waters until the following have been guaranteed that:

1. Alternatives to mining deep-sea minerals have been openly and transparently considered, taking into account ecological, social and economic perspective.
2. Strategic environmental assessments of the likely impacts of deep-sea mining on the marine environment have been carried out, including the potential cumulative effects in conjunction with other human activities.
3. Ecosystem-based oceans management policies, strategies, laws and regulations have been implemented that:
 - a. Collect adequate baseline information on the marine environment where mining could potentially occur including the location of sensitive deep sea habitats/ecosystems;
 - b. Establish a comprehensive network of well-managed protected areas to protect ecological support areas, vulnerable marine ecosystemsⁱ, ecologically or biologically significant areasⁱⁱ, depleted, threatened or endangered speciesⁱⁱⁱ, and representative examples of deep-sea ecosystems^{iv};
 - c. Define standards for the environment around any deep-sea operation, building on local, national and regional knowledge of the sensitivities of deep-sea ecosystems, to minimise environmental impacts and avoided significant and irreversible adverse environmental impacts;
 - d. Permit exploration or exploitation of minerals on or below the seabed only following Environmental Impact Assessments for each potential project, that include full identification, assessment and treatment of risks (including those with low probability, but high consequence)^v;
 - e. Assign liability to the owners or operators of exploration or exploitation facilities for the costs associated with the containment or cleanup of any unauthorised discharges of materials and/or waste and any damages resulting from such discharges (“polluter pays”); and,
 - f. Establish contractor-independent public assessment and monitoring of the permit conditions and potentially impacted ecosystems.
4. A comprehensive and adequately-funded mechanism has been established to cover clean-up costs, damages to affected parties, and the restoration of the environment associated with unauthorized discharges of materials

and/or waste where the responsible party is unknown, unable or refuses to pay.

WWF's commitment

WWF will support governments, international organisations, local communities and businesses to establish and implement strategic environmental assessments and ecosystem-based oceans management strategies to ensure sustainable and equitable use of deep seabed resources. WWF will also promote the discussion of alternatives to the use of deep-sea minerals in consumer countries.

ⁱ FAO (2009) (http://www.fao.org/fileadmin/user_upload/newsroom/docs/i0816t.pdf)

ⁱⁱ CBD (2008) (<http://www.cbd.int/cop/cop-10/doc/gobi-briefing-ebsa-process-en.pdf>)

ⁱⁱⁱ UNCLOS (Art. 194 (5))

^{iv} World Summit on Sustainable Development (2002) Plan of Implementation

^v Including provisions for contingency plans and bonds.

